June 7, 2002

To: Denny Lundberg
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This comments reflect the position of the Mississippi River Basin Alliance, Inc., a coalition of 159 nongovernmental organizations located throughout the entire Mississippi River basin. Many MRBA member organizations have membership within the proposed project area who recreate, work or otherwise utilize the resources of the affected rivers. Rather than do a line by line wordsmithing of the Interim Report, we are addressing our comments to issues unresolved during the last nine months of preparation of this report. We submit these comments in the spirit of improving the planning and development of a well-rounded and representative Feasibility Study and Environmental Impact Statement which will follow the guidelines set forth in this Interim Report, the guidance issued in August 2001, and the concepts put forth from the Principals Group.

Study Authority and Project Purpose:

As outlined in the Headquarters Guidance and as a result of discussions since then, the Corps has come closer to acknowledging the multi-purpose use of the Upper Mississippi and Illinois Rivers. This is acknowledged in the Interim Report:

"The Study has been restructured to give equal consideration of fish and wildlife resources along with navigation system improvement planning."[1]

However, as outlined in numerous discussions within the context of this Navigation Study and in this Interim Report, the Corps interprets their authority on the river as having a single authorized purpose:

"…the Upper Mississippi River – Illinois Waterway has navigation as the single authorized project purpose which limits the Corps ability to develop and manage the System to achieve both economic efficiency and environmental sustainability."[2]

"Options need to be explored to change the system from a single authorized project purpose to a dual project purpose. One option would be to modify existing project authorities to allow for navigation and ecosystem restoration to be treated as equal project purposes. Another option would involve the development of a new multi-purpose systems authority."[3]

Thus the Corps narrowly interprets it authorities within this study has having only that specific authority granted it in original authorizing language, narrowly interprets Federal Law, the Principles and Guidelines, and Engineering Regulations when developing studies such as this or when managing Inland Waterways currently existing. Despite the fact that significant environmental policy documents since 1958, with the passage of

[1] US Army Corps of Engineers. "Interim Report, Draft 5-10-02". p. 11. May 10, 2002. Rock Island District, Rock Island, IL.
[2] Ibid. p. 120.
[3] Ibid. p. 121

the Fish and Wildlife Coordination Act, and continuing into the 1970's with establishment of the National Environmental Policy Act, and substantial interagency agreements since then, these narrow interpretations, not founded in law but following an unwritten policy, hinder planning and operations and cause significant delays, conflict and expense to the nation and to the Corps.

Authority for the Upper Mississippi River-Illinois Waterway in cited by the Corps as Section 216 of the Flood Control Act of 1970 (Public Law 91-611):

> "The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest."[4]

The Corps, just as it did when it correctly expanded the scope of this study in August 2001[5], has considerable latitude to determine the scope of its planning and operations activities within frameworks established under law. Section 216 of the 1970 Act is NOT limited to reviewing merely the navigation portion of its projects, but is allowed to make recommendations "for improving the quality of the environment in the overall public interest.

Referring to the Corps Planning Guidance Workbook, ER1105-2-100[6]:

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[4] Ibid. p. 11.
[5] Department of the Army. Project Guidance Memo. August 2, 2001, Washington, DC..
[6] US Army Corps of Engineers. Planning Guidance Workbook, ER1110-2-100. April 22, 2000, Washington, DC.

"Within this framework, the Corps seeks to balance economic development and environmental needs as it addresses water resources problems. The planning process shall address the Nation's water resources needs in a systems context and explore a full range of alternatives in developing solutions. Innovative solutions and the application of the full range of the Corps programs and authorities are integral to the planning process."[7]

"Within the larger Federal interest in water resource development, the Corps of Engineers is authorized to carry out projects in seven mission areas: navigation, flood damage reduction, ecosystem restoration, hurricane and storm damage reduction, water supply, hydroelectric power generation and recreation. Navigation projects include both inland and deepwater projects. Ecosystem restoration projects improve ecosystem structure and function. Wherever possible and subject to budgetary policy, projects shall combine these purposes to formulate multiple purpose projects. For example, flood damage reduction projects could include ecosystem restoration and recreation; navigation projects could include hydroelectric power generation and ecosystem restoration. In carrying out studies to address problems and take advantage of opportunities within these mission areas, every effort should be made to formulate alternative plans that reasonably maximize the economic and environmental value of watershed resources, including urban watershed resources. In addition, every effort shall be made to be responsive to National, State and local concerns by considering the full range of programs available to provide solutions in a timely and cost-effective manner."[8]

The Principles and Guidelines under which this workbook is formulated clearly lay out a broader context under which Corps planning processes are to proceed and under which Corps operations are to be carried out. Further reference to this broad scope of Corps authority on existing projects is laid out in ER1110-2-8154, Water Quality and Environmental Management for Corps Civil Works Projects[9]:

"6. Policy

a. It is national policy that the Federal government, in the design, construction, management, operation, and maintenance of its facilities, shall provide leadership in the nationwide effort to protect and enhance the quality of our air, water, and land resources. …..

b. …. It is Corps policy to develop and implement a holistic, environmentally sound water quality management strategy for each project. This strategy must be developed in concert with other authorized project purposes. However, the environment will be addressed as equal in value and importance to other project purposes when developing or carrying out management strategies. The Corps will, at least, manage its projects in accordance with all applicable Federal and state environmental laws, criteria, and standards.

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[7] US Army Corps of Engineers. Chapter 1, 1-1, p.4

[8] US Army Corps of Engineers. Chapter 3, 3-1, p.26

[9] US Army Corps of Engineers. Water Quality and Environmental Management for Civil Works Projects, ER1110-2-8154. May 31, 1995. Washington, DC.

It is the goal of the Corps to responsibly manage our projects to maximize their environmental potential. The four pillars of the Army environmental strategy (conservation, prevention, restoration, and compliance) will help guide the Corps policy for water quality management."[10]

"Section 7. Commitment. a. ….. The Corps is fully committed to environmentally sound project management and operation. It is the policy of the Corps that the environment be given equal standing not simply consideration in all aspects of project management and the operational decision-making process."[11]

We believe that rather than lacking in authorities to plan, operate and maintain Corps projects, the Corps has ample authorities and regulations in place as outlined above, to conduct this study and **implement it** to fulfill the requirements of "equal project purpose" for navigation, environmental management and restoration. The Corps issues it engineering regulations under the authorities granted it to implement its various authorities granted under Federal law, and thus its authorities are extended under these engineering regulations. There are several other engineering regulations and Inter-agency memorandums addressing the issue of protecting the environment as it pertains to the Corps planning and operations of these rivers and these can be provided as needed.

A second significant issue regarding authorities is the discussion concerning responsibility and funding of ecosystem management and ecosystem restoration. The first question centers around definition of the project. Historically the Corps districts have interpreted "the project" as those lands and objects which have either been purchased or leased for project purposes and the facilities, such as dams, locks, harbors and water structures built to operate the inland waterway project. Water quality has been narrowly interpreted to apply only at site specific areas and limited to chemical quality only.

We believe that this narrow interpretation has lead to significant degradation of the water resources of these rivers and loss of natural resources to the nation within this project. The Corps 100+ years of actions in, on and around the Upper Mississippi and

[10] Ibid. p. 2
[11] Ibid. p. 3

Illinois Rivers has dramatically changed the overall quality of the human and natural resource environment. These have been well documented in the USGS and Corps co-sponsored Status and Trends Report of 1998[12] (a report produced by the Long Term Resource Monitoring Program of the Environmental Management Program, funded under the Corps authorities and totally ignored in the writeup of this draft Interim Report), and further outlined in the preliminary versions of the Cumulative Effects Report[13] for this navigation study, and noted in the Draft Fish and Wildlife Coordination Act Report[14], and in the Section 7 consultation for Endangered Species for Operations and Maintenance of the Upper Mississippi River – Illinois Waterway[15].

Clearly the construction of the locks and dams, the 100+ years of snagging and clearing throughout the system, the 100+ years of dredging the channel at hundreds of locations, the construction of harbors, the installation of thousands of water control structures, and the maintenance of water levels for the navigation system, as well as assumption of lands containing levees along the river, paint a picture of significant Federal actions by the Corps outlining through Corps actions, that the entire river system, within the floodplain has been and is part of the project and is a Corps responsibility for management, past, present and future, within the context of consulting with the various stakeholders. This includes the water upon which all such actions depend.

This is buttressed by the wording in ER1110-2-8154 cited earlier:

"7. Commitment
a. Corps water control projects (dams, local protection, levee systems, and navigation projects) store,

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[12] US Geological Survey. Ecological status and trends of the Upper Mississippi River, 1998. April 1999. LaCrosse, WI.
[13] US Army Corps of Engineers. Cumulative Effects Report, Vol. 1 & 2. 1999. Rock Island, IL.
[14] US Fish and Wildlife Service. Draft Fish and Wildlife Coordination Act Report for the Upper Mississippi River – Illinois Waterway System Navigation Study through August 1, 2001. April 2002. Rock Island, Il.
[15]

regulate, divert, constrict, or convey most of the surface waters in the United States. As water moves through Corps projects, the projects alter the physical, chemical, and biological character of much of that water. Consequently, Corps projects determine or significantly influence the ecological integrity of a large percentage of the riverine and estuarine environment in the United States. Corps water control decisions determine or significantly influence whether or not Corps projects have a positive or negative impact on the environmental value and human usefulness of much of the nation's water resources. As stewards of a significant percentage of the nation's aquatic environment, the Corps has a responsibility to preserve, protect, and where necessary restore that portion of the environment altered by Corps projects."[16]

"5. Definitions. ……c. Water quality - The physical, chemical, and biological characteristics of water as it occurs on or beneath the surface of the earth including its quantity, distribution, movement, sediments, and biological community (including transients)."[17]

Clearly this Engineering Regulation from 1995 points to a much broader responsibility for the Corps in defining what the project is and what it entails. These narrow interpretations of the Corps authorities have been incorrect. The Corps has corrected and broadened its regulations as Federal laws have changed to reflect the broader scope of Federal responsibilities in regard to environmental resources, but the Corps has failed to **implement** these broader responsibilities, either in operations, planning or budget requests. These historical responsibilities lie at the heart of disputes over definitions of the project, interpretations of operations and maintainance activities, and mitigation and restoration of the natural resource base of the two rivers.

The Issue Papers[18] outline two authorities beyond those cited about which allow the Corps to act upon its responsibilities for the natural resources of the rivers.

"Mitigation for completed Corps projects is addressed under Section 906(b) of the Water Resources Development Act (WRDA) of 1986. Text of a previously prepared fact sheet on this topic is instructive:

- This section establishes a comprehensive mitigation policy for water resources projects; subsection 906(b) dealing with post-authorization mitigation, states in part *"After consultation with appropriate Federal and non-Federal agencies, the Secretary (of the*

[16] US Army Corps of Engineers. Water Quality and Environmental Management for Civil Works Projects, ER1110-2-8154. P. 4. May 31, 1995. Washington, DC.
[17] Ibid. p.3.
[18] US Army Corps of Engineers. Issue Papers for the Principals Group, Draft. May 25, 2001. Rock Island, IL.

*Army) is authorized to mitigate damages to fish and wildlife resulting from any water resources project under his jurisdiction, whether completed, under construction, or to be constructe*d."

- ER 1105-2-100, revised version dated 22 April 2000, Appendix C, paragraph 15, Post-authorization Mitigation, states " *Section 906(b) of the Water Resources Development Act of 1986 authorizes the Secretary of the Army to mitigate damages to fish and wildlife without further specific Congressional authorization within certain limits.*"[19]

The Corps has responded to these issues by stating that current Corps **"policy"** has not allowed for implementation of these mandated Federal laws and policy directives acted on by Congress. This WRDA also authorized establishment of a Mitigation Trust Fund under Corps authorities to the funding of mitigation, under long term ongoing projects in which project implementation is likely to require sequential actions, rather than first-cost responses under current practice. The Corps has also declined to implement this fund due to **"policy"**.

We believe that Federal law and Corps Engineering Regulations layout the Federal responsibilities for 100% Federal response to the decline of the natural resources of the Upper Mississippi and Illinois Rivers. We believe that the evidence is overwhelming that the **primary causes** of this decline are due to the imposition of the inland waterway system upon these rivers and the failure of the Corps to modify its operations and maintenance activities as Federal law and Corps policies clarified these increased responsibilities to the environment.

We believe that under the conclusions stated in pages 120 through 125 of the Draft Interim Report, that the proscription for adaptive management for both environmental and economic considerations requires implementation of the Corps Mitigation Trust Fund authority, and that the primary funding vehicle for this trust fund should fall upon the Federal Navigation Project which has caused the impacts.

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[19] US Army Corps of Engineers. "Issues Papers as cited in Interim Report, Draft 5-10-02", . p. 144. May 10, 2002. Rock Island District, Rock Island, IL

Further support for Corps funding of these broad and cumulative project impacts is cited in ER1110-2-8154 which states:

"15. Funding
Many of the necessary water quality related activities for completed projects are clearly chargeable and should be charged to Operation and Maintenance funds."[20]

Much of the discussion over the past nine months has pointed out the difficulty in separating past and present impacts, and discerning the impacts caused from non-Navigation effects and Navigation effects. However the evidence is overwhelming, and all parties agree, that the significant impact of modifying flow regimes and managing water levels impose an undisputed, ongoing primary impact to the system. This requires a full Federally funded response under existing Corps authorities.

Response to Comments on Study Authority and Project Purpose:

Response 1. We agree with the MRBA that the Corps has the authority to conduct the navigation study to address navigation, and ecosystem management and restoration. The Interim Report demonstrates the Corps' commitment to complete the navigation feasibility study to address an environmentally and economically sustainable system. Included within that commitment is the Corps' intent to address ecosystem and floodplain management needs related to navigation, and to operate and maintain the navigation system to ensure economic, environmental, and social sustainability. The difficulty is in the implementation. The Corps does not have the authority to immediately implement an ecosystem management and restoration plan for the nine-foot channel of the UMR-IWW. Existing Corps authorities have allowed for implementation of limited measures pursuant to the EMP and other national programmatic authorities and the limited environmental management activities available under a single purpose navigation project. Congressional authorization and appropriation is required for a plan and projects to more fully address ecosystem restoration of the system. In order to develop a comprehensive understanding of why the Corps lacks authority to implement a large- scale plan of ecosystem restoration measures without additional Congressional authorization, a complete reading of the legislation and guidance must be undertaken. Although Section 216 of the Flood Control Act of 1970 (Public Law 91-611) does provide clear authority for the Corps to review the operation of completed projects to examine the advisability of modifying the

[20] US Army Corps of Engineers. Water Quality and Environmental Management for Civil Works Projects, ER1110-2-8154. P. 9. May 31, 1995. Washington, DC.

structures or operations of these projects, including modifications for improving the quality of the environment, a complete reading of the Section 216 reveals that the product of the review of the completed project is a report to Congress with recommendations on modifying the project. In this case, the Corps is producing the report as the Restructured Navigation Feasibility Study. Some modifications to the UMR-IWW nine-foot channel project that are under consideration, including those that would improve the quality of the environment, must be approved (authorized) by the Congress before seeking appropriations to implement them.

Similarly, the April 22, 2000 Planning Guidance (ER 1105-2-100) is the Corps guidance covering authority to conduct studies and implement plans for environmental restoration. It is this Planning Guidance that provides guidance for feasibility studies accomplished to seek the authority from Congress to implement water resources projects including those for ecosystem restoration. The regulations do not assert or imply that the Corps has the authority to expend Federal funds for purposes which have not been authorized by Congress.

As for the project water quality policy goals contained at ER 1110-2-8154 implementation guidance to achieve these goals is contained at paragraph 6.c. The guidance at paragraph 6.c. encourages Corps Districts to program funds for environmental restoration of aquatic, wetland, and upland habitat where Corps projects or their operations have caused quantifiable damages to these resources and where projects modifications would result in cost –effective solutions. The guidance further provides that such restoration projects may be initiated using the General Investigation feasibility procedures that require Congressional authorization and non-Federal cost-sharing partners, or be pursued under the nationwide authorities of Section 1135 of the Water Resources Development Act of 1986, as amended (WRDA 86), and Section 204 of WRDA 92, as amended and the study authority of Section 216 of the Flood Control Act of 1970. In summary, the Corps believes that the regulatory guidance cited by MRBA reinforces rather than contradicts the authorities discussion in the Interim Report. Accordingly, additional Congressional authorization followed by an appropriation of funds to implement the Congressional authorization will be required to address the ecosystem restoration needs of the UMR-IWW.

Response 2. The Corps recognizes that the ecosystem of the UMR-IWW is in a state of decline and there are ongoing cumulative impacts of navigation and flood damage reduction measures. The restructured Navigation Feasibility Study will include the development of the base goals and objectives and develop measures and plans to address the ecosystem restoration objectives linked to the UMR-IWW. The base level goals and objectives may serve as the basis for on-going Corps studies and programs including EMP, the Comprehensive Study, Illinois Ecosystem Study, and the Operations and Maintenance Program. Efforts outside Corps activities such as the USFWS comprehensive refuge management plan may be involved in this process. Other studies and programs will address other restoration needs of the river system including its floodplain. As stated in the response to the first comment, additional Congressional

authority and appropriations are needed to implement ecosystem restoration as a project purpose of the UMR-IWW Nine-Foot Channel.

Response 3.

Section 906(b). Section 906(b) authorizes the Secretary of the Army, after consultation with appropriate Federal and non-Federal agencies, to mitigate damages to fish and wildlife resources to projects under the Secretary's jurisdiction whether completed, under construction, or to be constructed. Under this authority, the Corps may not complete acquisition of land at completed or partially completed projects by condemnation. In other words, the Corps may only acquire property from willing sellers. In the event condemnation is required for acquisition of mitigation lands, there is a requirement for a submission of a report to Congress with recommendations. Additionally, under Section 906(b) the costs of the mitigation are allocated to all project purposes and shared to the same extent as those other purposes are shared. Section 906(b) authority is limited to nationwide expenditures of $30 million in any fiscal year and per project, only expenditures of $7.5 million or 10 percent of project costs, whichever is greater. The restructured navigation study, aimed at holistically achieving an environmentally and economically sustainable system, has a much broader, comprehensive and regional focus than the relatively small-scale projects for which Section 906(b) was enacted. The restructured Navigation Feasibility Study will examine the ongoing and cumulative impacts of the UMR-IWW. The result could be a recommended plan for Congressional authorization and appropriations to address these impacts in a comprehensive fashion. Congressional authorization will be sought which will not be subject to the limitations in Section 906(b). This broader collaborative effort involving all stakeholders will assure the public support necessary to ensure success for the UMR-IWW to continue to be a nationally treasured ecological resource as well as an efficient national transportation system.

Section 908. Section 908 of WRDA 86 authorizes an Environmental Protection and Mitigation Fund with an authorized appropriation of $35 million for fiscal years beginning after September 30, 1986. Amounts in the fund are available for undertaking mitigation in advance of authorized construction of a water resources project. Funding for this mitigation fund have not been included in Administration budgets nor appropriated by the Congress, primarily because mitigation for an authorized water resources project could be budgeted and appropriated as an early item in project construction to assure timely completion without the need for a mitigation fund. The Environmental Protection and Mitigation Fund is only authorized for advanced mitigation for new projects, and not for mitigation of the ongoing impacts of existing projects such as the UMR-IWW Nine-Foot Channel.

Response 4. The funding issue has been addressed in some detail in Section 3.3 of the final Interim Report. As discussed in the Interim Report there are a number of options for funding and cost-sharing UMR-IWW ecosystem restoration measures. Measures to address the incremental impacts of navigation improvements and site-specific impacts may be shared as inland navigation costs and funded 50/50 between the Inland

Waterways Trust Fund and the general fund of the Treasury. For the remaining measures to address the new sustainability goals and objectives, there are three primary funding options under consideration: cost sharing as ecosystem restoration; 100% Federal cost under a concept of addressing any ongoing impacts of the existing system; and cost sharing in accordance with the existing or a modified Environmental Management Program. The tentative conclusion of the Interim Report is that ecosystem restoration measures to assure the sustainability of the system will require a combination of 100% Federal and cost-shared measures. Criteria for determining the 100 percent Federal and cost-shared portions will be developed in the feasibility study.

Floodplain Management

"2-6. A Watershed Perspective. Civil works planning should incorporate a watershed perspective, whether that planning involves a project feasibility study or a more comprehensive watershed study. Such planning should be accomplished within the context of an understanding and appreciation of the impacts of considered actions on other natural and human resources in the watershed. In carrying out planning activities, we should encourage the active participation of all interested groups and use of the full spectrum of technical disciplines in activities and decision-making. We also should take into account: the interconnectedness of water and land resources (a systems approach); the dynamic nature of the economy and the environment; and the variability of social interests over time. Specifically, civil works planning should consider the sustainability of future watershed resources, specifically taking into account environmental quality, economic development and social well-being."[21]

Another issue raising concern among our members is the slight given to the issue of floodplain management and floodplain connectivity under the new study guidance. The Interim Report cites that the primary vehicle for this issue investigation will fall to the 1999 Comprehensive Plan which is just being scoped by Corps planners. The preliminary scoping of this work however reveals that due to budgetary and time constraints, this critical area of mitigation and ecosystem restoration response will NOT be thoroughly investigation and recommendations are likely to be limited. The Corps responsibility under its authorities to respond to sustainability of the natural resource system require that this

[21] US Army Corps of Engineers. Planning Guidance Workbook, ER1110-2-100. p.2-16 April 22, 2000, Washington, DC.

critical area of investigation be thoroughly integrated within the Navigation study. System sustainability without addressing floodplain connectivity issues is likely unachievable thus placing any recommended plan in jeopardy of violating the Corps guidance and NEPA. We urge the Corps to expand the 1999 Comprehensive Plan, integrate it within the Navigation study, and commit the resources required as part of completing the Navigation study to this integration and investigation.

Response to Comments on Floodplain Management: The Upper Mississippi River Comprehensive Plan will embrace the dual overarching goals of flood damage reduction, and associated environmental sustainability. An integrated study approach with the Navigation Study will allow both studies to benefit from the ongoing effort of identifying ecosystem goals and objectives for the system. This effort will address the potential for floodplain connectivity.

Scenario Development and the Use of the Tow Cost Model

Time constraints under which comments for this Interim Report are being rushed in, do not allow us to fully articulate our concerns regarding the Economic Scenarios, their integration with Environmental planning, nor time to discuss the improper directions to the study team to utilize the Tow Cost Model for development of economic indicators.

We generally agree with the comments submitted by the Public Employees for Environmental Responsibility in their comments submitted on June 6, 2002 and append their comments to ours. We are deeply concerned with the failure to integrate Risk and Uncertainty Planning upon the Scenario Development which places no quantitative adjustment upon the five scenarios for their varied projections of future actions in the trade markets which most affect shipping on these rivers. We believe the Corps must provide sufficient resources to examine these scenarios for their uncertainty and risk and modify any projections based upon such guidance.

Response to Comments on the use of scenario analysis and the Tow Cost model. As currently constructed, individual scenarios will not be evaluated with respect to numerical probability or likelihood of occurrence. A single most probable without-project condition therefore will not be identified. The intent is to evaluate alternatives across all scenarios and identify those that best meet the evaluation criteria across the range of scenarios. This type of scenario-based assessment is not the traditional method in Corps feasibility studies; however, the scenario-based approach is consistent with the *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* (P&G), the procedural and analytical framework for Corps feasibility studies. In consideration of comments from the stakeholders, options for identifying probabilities, as part of a sensitivity analysis will be explored in the feasibility study. An Independent Technical Review is also underway that will include exploring the practicality of identifying probabilities for each scenario.

The National Research Council concluded that the spatial model utilized in the original study was a step in the right direction; however, it contained flawed assumptions and data. Their recommendation was not to use the ESSENCE model in the feasibility study. They did, however, recommend that further development of the spatial model and additional data collection should be accomplished to support the feasibility study. The initial estimate to fully comply with the NRC recommendations was many years and considerable funding. There was some question as to whether their recommendations were even possible. This left the Corps with the challenge of how to move forward with the feasibility study in a timely manner. The Corps, in coordination with the Federal Principals Task Force, concluded that further development of a spatial model was a good idea; however, it should be performed in a research and development setting outside the study process. They also concluded that an existing model should be used to complete the feasibility study as soon as possible. The existing model selected as the tool to evaluate the NED transportation impacts associated with the various alternatives is the Tow Cost Model (TCM).

The Corps will explore opportunities for incorporating spatial concepts into a sensitivity analysis during development of the recommended plan. The Corps will also continue development of a new spatial model on a parallel effort through its research and development program. As new methodologies become available, consideration will be given to incorporating them into the restructured navigation feasibility study.

MRBA will continue to participation and revise and extend its comments submitted for the Interim Report. We continue to encourage the Corps to conduct this study in full collaboration with stakeholders and seek to fulfill its proscriptions for achieving sustainability of natural resources within the operations and maintenance of the navigation system.

Submitted by:

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Comments submitted by PEER to which MRBA generally concurs and requests full consideration and discussion at Navigation study meetings.

June 5, 2002

Denny Lundberg
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Dear Mr. Lundberg:

INTRODUCTION

On May 10, 2002 the U.S. Army Corps of Engineers released "The Draft Interim Report for the Upper Mississippi River and Illinois Waterway Restructured System Navigation Feasibility Study." The Corps hailed this document as "a blueprint for moving forward with the feasibility study to ensure the UMRS [Upper Mississippi River System] continues to be a nationally treasured ecological resource as well as an effective transportation system." Draft Interim Report for the Upper Mississippi River and Illinois Waterway Restructured System Navigation Feasibility Study, 2 (May 10, 2002).

The stated purpose of this effort is "to reduce lock congestion" while achieving an environmentally sustainable system that addresses ecosystem and floodplain management needs related to navigation. § 1.1 Draft Interim Report, 11.

Significantly, the Draft Interim Report purports to establish the "existing and future without project conditions" for use in the final study. § 2.1, Draft Interim Report, 35. Because the Corps will not further review these conditions after the Interim Report is finalized, this Draft Interim Report is itself a decision document and not merely a preliminary "draft."

Public Employees for Environmental Responsibility (PEER) hereby submits the following comments to the Draft Interim Report for UMRS:

SUMMARY OF COMMENTS

Summary-
This Draft Interim Report:

- Violates the National Environmental Policy Act (NEPA), the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G), and the Corps' own Engineering Regulations (ER);

- Mischaracterizes, ignores, and contradicts the explicit recommendations of the National Research Council (NRC) of the National Academy of Sciences; and

- Constitutes a significant step backwards in Corps planning to the detriment of the true system stakeholders, the taxpayers.

DETAILED COMMENTS

I. The Draft Interim Report violates the National Environmental Policy Act, the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, and the Corps' own Planning Guidance and Procedures for Implementing NEPA.

A. The determination of without project conditions contained in the draft interim report is a violation of federal law and regulation.

NEPA, 42 U.S.C. § 4321 et seq., requires an objective scientific evaluation of a plan's environmental and economic impacts; failure to perform an objective benefit and cost analysis violates both the spirit and letter of the law. The Council on Environmental Quality (CEQ) has laid out the precise procedure for drafting an Environmental Impact Statement (EIS), including a determination of the "without action [project] condition." *See* CEQ NEPA Regulations, 40 C.F.R. §§ 1500-1508 (2002).

The Corps' own regulations governing NEPA compliance require, *inter alia*, that "[a]gencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in the environmental impact statements…." Procedures for Implementing NEPA, ER 200-2-2 (1988), 33 C.F.R. § 230 (2002). The Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, promulgated in 1983 by the Water Resources Council pursuant to the Water Resources Planning Act, 42 U.S.C. § 1962(a)(2), establishes criteria for the evaluation of all federal water resource projects; the Planning Guidance Notebook, ER 1105-2-100 (2000), implements P&G for the Corps. These guidelines require that all Corps planning studies use the potential consumers' willingness to pay as the measure of national economic development benefits.

Despite these requirements, the Corps, in determining the without project conditions for the Draft Interim Report, rejects the use of elasticity as a factor in the demand function. It makes an incredible assertion when it states that "[d]emand elasticity is not an issue given the decision to employ a non-spatial model that does not incorporate the notion of demand elasticity." § 1.8.2 Draft Interim Report, 31. The "non-spatial model" referred to is the Tow Cost Model (TCM), whose use is a clear violation of NEPA because it relies on a method of economic analysis that disregards the willingness to pay for incremental units of output afforded by potential system actions (*i.e.*, what economists call "elasticity").

Elasticity is the measure of beneficial National Economic Development (NED) impacts of potential system action mandated by P&G, producing a cost-benefit ratio consistent with environmental protection. §§ 1.6.3, 1.7.29(b) P&G (1983). Saying that elasticity of demand is not an issue in the NED evaluation of potential navigation projects is like saying that gravity is not an issue in the launch of the space shuttle.

Elasticity of demand is the NED issue. If elasticity is not an issue because of the use of TCM, how can that model accurately measure the willingness to pay for incremental units of output afforded by an action or plan?

Federal law also mandates that agencies "shall not commit resources prejudicing selection of alternatives before making a final decision." 40 C.F.R. § 1502.2 (2002). By relying upon TCM, the Corps artificially inflates NED benefits to produce a result that favors immediate, large-scale improvements. Because Corps hierarchy is known to favor these types of projects, whether or not they are necessary, it becomes apparent that the decision to disregard elasticity of demand in the Draft Interim Report was made to further these ends.

B. The Draft Interim Report flies in the face of the Corps' own Economic and Environmental Principles and Guidelines (P&G).

Both P&G and the Planning Guidance Notebook require Corps planning studies to evaluate all federal water resource projects based on the most likely future project parameters. *See* § 1.4.9 P&G (1983), § 2-4 Planning Guidance Notebook, ER 1105-2-100 (2000).

By contrast, the Draft Interim Report uses scenario-based planning to establish these future project parameters. § 1.8.3 Draft Interim Report, 30. Nowhere in the report, however, does the Corps objectively analyze the likelihood of these scenarios. Without such a determination, it is impossible to accurately decide which of the scenarios offered is "most likely" pursuant to Corps regulations. This allows the Corps to arbitrarily choose that scenario which enhances the need for immediate, large-scale project improvements instead of evaluating the project according to P&G and the Planning Guidance Notebook.

Furthermore, the Draft Interim Report has perverted the planning objective contribution to NED by improperly reducing the study objective to transportation savings or reductions in congestion. Reducing lock congestion may or may not be in the NED

interest dependant upon the costs and effectiveness of the measures available to reduce lock congestion. Thus, the narrowed restatement of the study objective to "reduce lock congestion" is another violation of P&G and a complete contradiction of the NRC recommendation to broaden the study scope.

Finally, all references to "transportation costs savings" should be removed from the Draft Interim Report. As the least-likely benefit to accrue, transportation costs savings are a gross oversimplification of NED benefits calculation. It can also be argued that these so-called transportation cost savings are not a meaningful measure of anything related to the potential NED benefits and are extremely misleading in that they are, by definition, grossly larger than any potential NED benefits of reducing lock congestion.

C. Due to the lack of required sensitivity, the Corps may make no further use of this Interim Report.

In recognizing that the future is uncertain, the Corps has for many years routinely included, at a minimum, a sensitivity analysis in its feasibility studies. A sensitivity analysis is designed to explore the robustness of potential recommendations to future unknown changes in critical economic, operational, and environmental parameters. Sensitivity analysis is preferred to scenario-based planning and should be the minimum standard for evaluating scenarios, risks, and uncertainties inherent in forecasting fifty years into the future.

With this Draft Interim Report, the Corps has failed to establish the without project conditions accurately, objectively, and according to clear guidelines established by NEPA, P&G, and the Corps' implementing regulations. Because of these violations, the Corps cannot not use this Draft in the final study and hope to remain in compliance with the law.

II. The Interim Report mischaracterizes, ignores, and contradicts the explicit recommendations of the National Academies of Sciences' NRC for the credible conduct of the UMRS Navigation Feasibility Study.

NRC evaluated the original study's economic, environmental, and engineering analyses in February 2000 in response to a request made by the Secretary of the Army to investigate irregularities previously disclosed to the U.S. Office of Special Counsel, and to formulate and evaluate potential recommendations.

NRC completed this investigation and evaluation in a February 2001 document entitled "Inland Navigation System Planning: The Upper Mississippi River-Illinois Waterway." In addition to evaluating the original study, the 129-page report offered many recommendations as to the directions and analyses for future study of UMRS. The Draft Interim Report characterizes the recommendations of NRC in a single paragraph:

> The NRC report included many recommendations, however, there were four conclusions that provided the main impetus for the restructured study. They are:
>
> 1. The study should include equal consideration of fish and wildlife resources,
> 2. The study should assess ongoing effects of the existing Nine-Foot Channel Project,
> 3. Defensible 50-year forecasts are unlikely to be achieved,
> 4. The Spatial Equilibrium Model used was incomplete and should be further developed. It also lacked sufficient data to support assumptions.
>
> § 1.7.2.2 Draft Interim Report, 25.

The Draft Interim Report then offers these so-called "conclusions" as the reasons underlying the restructure of the UMRS study under a "new spirit of collaboration." Apparently, this new spirit of collaboration does not extend to NRC; nearly all of the specific recommendations pertaining to the conduct of the restructured study's economic and engineering analyses have been mischaracterized or ignored completely.

A. The Corps' use of scenario-based analysis in the Draft Interim Report is contrary to the explicit recommendations of NRC.

NRC did not recommend the scenario-based analysis that the Corps has adopted. Instead, NRC recommended that whatever forecasting technique was employed to estimate future conditions of the system should explicitly account for the uncertainty inherent in the forecasts. National Research Council, Inland Navigation System Planning: The Upper Mississippi River – Illinois Waterway, 74-76 (National Academy Press, 2001). The Corps' scenario-based analysis for forecasting future traffic flows uses five discrete scenarios, selected by a single forecaster, Sparks Companies, Inc., whose corporate vision statement is "To be a vital force in the success of food and agricultural industries around the world."

These scenarios are then differentiated by export demands for agricultural products without an assessment of the probability that any of these forecasts actually approximate future demands. This is in clear conflict with the NRC recommendation of unequivocally recognizing and addressing the uncertainty in the forecasts of future demands. In fact, the NRC report explicitly states that scenario-based analyses, "can produce insights but it rarely produces useful estimates." Id., 65.

Furthermore, the NRC report did not state that "[d]efensible 50-year forecasts are unlikely to be achieved." § 1.7.2.2 Draft Interim Report, 25. Rather, the NRC report criticizes the original Corps study forecasts, stating that the "fault lies not in getting the forecasts wrong. It is impossible to accurately forecast barge movements 50 years into the future or to forecast the costs of a large construction project . . . . *[T]he Corps should have examined the uncertainties explicitly*" [emphasis added]. NRC, Inland Navigation System Planning, 48, 49. As NRC notes, defensible forecasts by their very nature must explicitly address the uncertainty associated with their eventuality. Scenario-based analyses serve the very useful purpose of beginning the process of understanding the uncertainty inherent in forecasting the future, but do not serve as a substitute for rigorous qualitative or quantitative analyses.

B. Corps use of TCM in the Draft Interim Report is a regression in economic theory that overstates NED benefits and contradicts NRC direction.

The NRC report states:

> As a result of flawed assumptions and data, the current (September 2000) results of the spatial equilibrium model and the ESSENCE model should not be used in the feasibility study. The problem lies not in the theoretical motivation behind these models, but in their implementation and data used as input. To correct these problems, the Corps should: (1) obtain a satisfactory database of grain and other relevant freight shipments by barge and alternative modes which includes quantity, origin and destination, and price are included, [*sic*] (2) revise the ESSENCE model, eliminating assumptions that shipment costs are proportional to distance and that agricultural yields are uniform, (3) estimate demand and supply sensitivities to price from studies of current data, and assure that model parameters reflect these price sensitivities, and (4) include spatial equilibrium concepts in its ESSENCE model.
>
> NRC, Inland Navigation System Planning, 3.

The NRC report further states that the Corps' "endorsement of the theoretical concept of spatial equilibrium is commendable, because accepted theoretical concepts will form a more credible basis for benefit estimation than the approaches formerly used by the Corps." Id., 33.

The restructured study ignores all of these fundamental economic analysis recommendations and instead regresses to use TCM with ten-year-old data for evaluating the NED impacts of potential navigation system improvements; the spatial equilibrium-based NED model is relegated to a separate research track independent of the study.

Ignoring the NRC recommendations and adopting TCM renders the economic analysis of the restructured study completely meaningless because it employs the next-least-expensive alternative transportation mode between existing origins and destinations as the sole estimate of the NED benefits of navigation projects. NRC addressed this very issue when praising the advances made by the original study, asserting that

> the recognition that a shipper's willingness to pay for navigation services is more complex than simple next-least-expensive mode calculations, and that it might even involve alternative markets or other types of business decisions, is an advance over previous methods. These theoretical developments are most welcome, and efforts to transform these concepts into useful decision support models should continue.
>
> Id., 37.

Using TCM for the restructured study is indefensible in light of the original study team's rejection of that model as inappropriate and the NRC recommendation to use the spatial NED model in the execution of the restructured navigation system study. TCM vastly overestimates NED benefits of immediate lock expansions when compared to evidence in the real national economy; its use in the restructured study casts grave doubts regarding the Corps' true collaborative intentions.

C. The economic scope of the Draft Interim Report is inappropriate for the importance of the project under review.

The NRC report criticized the original study's purpose and scope for being too narrow. In response, the Corps commendably broadened the environmental scope of the original study. At the same time, however, the Corps has narrowed the economic scope for the restructured study to "reducing lock congestion." § 1.1, Draft Interim Report, 11. This economic scope is ill-defined and inappropriately narrows the economic perspective of such an important study. The broader and more fundamental economic scope should be restored to "providing an efficient navigation system."

For example, congestion at the locks can be reduced by simply reducing the number of tows arriving at the locks demanding lockage. With fewer arrivals at the system locks there would be less congestion at the locks, but this is not what the Corps means by reducing congestion at the locks. The broader and more fundamental economic scope should be restored to "providing an efficient navigation system that contributes to National Economic Development."

This broader scope embraces the fact that potential investments in UMRS have both beneficial NED consequences, like reducing water transportation costs, and negative NED consequences, like consuming scarce resources that could otherwise be productively employed elsewhere in the national economy.

D. The Corps has ignored NRC recommendations on methods of estimating costs of the project.

The NRC report made two important recommendations regarding future engineering analyses for UMRS. It noted that the rehabilitation costs savings estimates of lock extensions should be re-estimated in light of new alternative forecasts of future system traffic levels and that the real construction costs of large-scale measures were subject to great uncertainties and should be revisited by the Corps. NRC, Inland Navigation System Planning, 59. The restructured study ignores these two critical recommendations and offers no insights as to how the Corps will re-estimate these critical cost categories.

E. Finally, the Corps has neglected to secure independent peer review for the restructured study.

NRC recommended an independent peer review for this study. It stated, "[l]arge and important projects such as the proposed lock extensions on the UMR-IWW [UMRS]

would benefit from a second opinion." Id., 60. The Draft Interim Report makes no mention of a provision for independent peer review. The NRC report goes so far as to state that the "careful scrutiny of the analysis" in "important decisions - particularly ones involving more than $1 billion of construction . . . is crucial." Id. An independent peer review should be proposed at the conclusion of the Corps' restructured study to provide that valuable second opinion recommended by NRC.

In fact, the Corps decision to use the TCM model would benefit from an immediate peer review (perhaps conducted by the NRC) as this decision alone charts a study course destined to produce NED evaluations of the navigation system that are without any foundation in reality.

III. The Interim Report constitutes a significant step backwards in Corps planning to the detriment of the true system stakeholders, the taxpayers.

A. The five unconstrained forecasts of future demand scenarios are of little use in determining the constrained without project futures.

The newly-created five unconstrained forecast scenarios described in the Draft Interim Report cannot establish the without project conditions. *See* § 2.4.3.1 Draft Interim Report, 63-74. Any without project traffic forecasts are, by definition, constrained by the without project operating conditions of the navigation system itself. Consequently, unconstrained forecasts have little to do with establishing the constrained without project futures.

In addition, the unconstrained forecasts of future demand scenarios are analytically deficient; all five forecasts were constructed without regard to potential transportation system costs and prices in the multiple without project conditions. How can the restructured study meaningfully forecast future without project demands for any so-called scenario without a forecast of future prices that impact those demands?

Furthermore, the interdependence between the levels of demand for water transportation of agricultural and non-agricultural products as they compete for use of scarce barge supplies in the without project future are completely ignored in the construction of the five unconstrained traffic scenarios. A single estimate of future system traffic for non-agricultural-related products is added to each of the five agricultural product traffic estimates to produce five traffic scenarios. Forecasting traffic flows independently ignores the competition between products for use of the scarce privately-supplied resources and likely will overstate traffic for all the scenarios.

B. TCM vastly overstates NED benefits to provide favorable recommendations for immediate, large-scale improvements to UMRS.

TCM necessarily overstates the direct NED transportation benefits of system actions designed to reduce congestion to system users. Regressing to a discredited, self-serving

economic model such as TCM, as mandated by Corps headquarters, is guaranteed to overstate the benefit of potential system actions; this is indefensible, not supported by the study team economists, and completely counter to NRC recommendations and a credible economic analysis.

Given the relatively small economic benefits of reducing existing lock congestion, the importance of establishing the values of lock condition-related investments in the with project future relative to the without project futures is critically important to establishing the potential economic benefits of alternatives primarily designed to reduce system congestion. The original study made great strides in extending the state of the art for measuring the value of condition-related system investments. Rather than discard these advances by claiming that they are "beyond the state of the art," the state of the art should be pushed forward to better measure the future condition-related requirements for UMRS with or without navigation improvements. The credibility of study conclusions can only be improved with a rigorous analysis of the potential benefits and costs of condition-related investments in the navigation system.

C. The Draft Interim Report mischaracterizes and misrepresents traffic forecasts to inflate the need for immediate, large-scale improvements to UMRS.

Throughout the Draft Interim Report, the Corps makes several self-serving statements unsupported by facts:

1. The statement that the "greater the unconstrained waterway traffic demand, the greater the potential base of transportation savings to be realized" is meaningless and irrelevant to the evaluation of potential measures to increase the economic efficiency of the navigation system. § 2.5.3.1 Draft Interim Report, 112. The statement should therefore be removed.

2. The statement that the "magnitude of the investment required to realize a gain in system efficiency is directly related to the level of unconstrained waterway traffic" may not be true. Id. In fact, the lower the cost of measures to improve system efficiency, the more likely it is that efficiency can be improved. For example, low-cost, small-scale measures such as congestion fees, tradable permits, or helper boats may have a much greater increase in efficiency than the implementation of costly large-scale measures such as lock expansions. The statement should be removed until a real, unbiased economic analysis is completed.

3. The statement that the "lower portion of the system, where traffic is the greatest, must be addressed first if an improvement in system efficiency is to be realized" may or may not be true dependent upon the interaction of future traffic patterns and the cost of measures designed to improve the operating characteristics of the lower system locks. Id. The statement should be removed until a real, unbiased economic analysis is completed.

4. The statement that "[c]apacity expansion at Locks 20-25 may be economically justified under a number of scenarios" is misleading and premature. Id. The scenarios

under which capacity expansions may be economically justified may have little or no chance of ever occurring. Furthermore, without any evaluation of system users' willingness to pay under these hypothetically-constructed traffic scenarios, no meaningful justification of any capacity expansions or other system actions can be made. The one true statement that can be made right now is that capacity expansions are not justified given the current flat or declining traffic levels evidenced in the system and the current observable prices that system users do and are willing to pay right now.

In fact, during the ten-year period beginning in 1992 through 2001, which roughly corresponds with the duration of this study, the number of barges processed annually at Locks 20-25 has decreased by over 20 percent. This decrease has occurred without any increase in congestion in the system. It would be quite unusual to increase system congestion by decreasing system usage! How can the Corps credibly make the statement that capacity expansion (to reduce congestion) may be economically justified under a number of scenarios when recent history and current evidence overwhelming support exactly the opposite conclusion?

D. Due to the defects in the Corps' methodology, the Draft Interim Report does not effectively analyze project alternatives.

The original UMRS feasibility study was directed and designed to preserve the distributional characteristics of the critical data employed in the formulation and evaluation of alternative plans. Scenario-based without project futures do not preserve or even consider the likelihood of these scenarios occurring and, therefore, are a decided step backwards in the rigor of standard Corps analysis.

It is impossible to formulate real alternatives to address the problems and opportunities of a future without project condition for UMRS when the future without project conditions described in this draft interim report are so poorly specified. There is no discussion whatever of what the future without project economic conditions might look like; there are only five unconstrained forecasts of future traffic levels without any assessment of their likelihood of occurrence. As the Corps well knows, the future without project conditions (and for that matter the future with project conditions) are most certainly constrained by both the physical operating characteristics of the system improved (or not) and the willingness of users to pay for the cost of supplying inland waterway navigation.

Furthermore, the Draft Interim Report drops the original study's constrained federal budget analyses, claiming that "the need for a constrained budget scenario diminished over time." § 1.7.1.4 Draft Interim Report, 19. Constrained budget scenarios are more important than ever given the recent forecasts of federal government budget deficits for the foreseeable future. The study was originally directed to consider alternatives formulated for and evaluated in the light of budget constraints. This requirement should be maintained for the restructured study. Real budget constraints can dramatically alter the best set of alternatives for managing UMRS in the future. The omission of budget-constrained analyses is a fundamental error in examining the robustness of potential recommendations.

The navigation alternatives described in the draft interim report appear to be just the same old set of alternatives that the Corps was advocating during the original study, with the possible appendage of some very vague tiered ecosystem enhancement alternatives. These environmental IOU's and navigation alternatives taken together appear to be designed to whet the funding appetites of local environmental groups and make navigation system improvements more palatable to them. The Corps seems to be attempting to broaden the local support coalition at the expense of the taxpayers at large.

CONCLUSION

The Corps seems to conclude that the integration of the multiple uses of UMRS would be better if the Corps had integrated authority for "funding" and "oversight" of the system activities of Navigation Improvements, Operation and Maintenance, Ecosystem Restoration, and Flood Control. *See* § 4 Draft Interim Report, 120-121. PEER does not believe it is in the interest of anyone to make the Corps omnipotent on this or any system. Checks and balances to Corps authority are needed to prevent the kind of self-serving conclusions reached by Corps senior managers and commanders, as clearly evidenced by their behavior in this original study.

The recommendation to continue the development of the spatial equilibrium model independent of this study, and return to the previously abandoned TCM, is a sad and regrettable recommendation. This proposal is completely counter to the Corps' self-proclaimed "new spirit of collaboration;" its use is transparently self-serving for the Corps and the navigation industry, as it will conclude that you cannot build lock expansions fast enough to keep up with the constructed unconstrained traffic forecasts. This model employs the same economic logic that justified the wasteful expenditures on the Tennessee-Tombigbee Waterway, and the continuing overbuilding of the navigation system on the Ohio River.

With no new economic analysis evidenced in this document, it is very difficult to come to any conclusions or recommendations no matter how preliminary they may be. As such, the Corps should make no further use of the Draft Interim Report until competent economic analysis has been completed using an appropriate economic model.

Sincerely,

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Executive Director

Kathleen Timmins
Environmental Law Clerk